Claims

What is claimed is:

1. An seatback audio system for use with a seat, comprising:

a seatback having a surface;

a first speaker having a first lateral dimension coupled to the surface of the seatback;

a second speaker having a second lateral dimension coupled to the surface of the seatback; and

a sound barrier coupled to the surface of the seatback and positioned between the first speaker and the second speaker;

where the sound barrier has an outermost surface spaced from the surface of the seatback by a distance.

2. The seatback audio system of claim 1 where the first lateral dimension is equal to the second lateral dimension.

3. The seatback audio system of claim 1 where the distance is greater than one-eighth of the first lateral dimension.

4. The seatback audio system of claim 1 where the distance is greater than one-quarter of the first lateral dimension.

5. The seatback audio system of claim 1 where the distance is greater than one-half of the first lateral dimension.

6. The seatback audio system of claim 1 where the surface of the seatback includes a concave surface, and the first speaker, second speaker and the sound barrier are each coupled to the concave surface.

7. The seatback audio system of claim 1 where the surface of the seatback includes a first concave surface and a second concave surface, and the first speaker is coupled to the first concave surface and the second speaker is coupled to the second concave surface.

8. The seatback audio system of claim 1 where the first speaker and the second speaker are arranged as a dipole.

9. The seatback audio system of claim 1 where the seatback includes a headrest, and the surface of the seatback is the surface of the headrest.

10. The seatback audio system of claim 1 where the seatback is a backrest, and the surface of the seatback is the surface of the backrest.

11. The seatback audio system of claim 1 where the sound barrier is positioned to align with a spine of an occupant of the seat.

12. The seatback audio system of claim 1 where the first speaker produces a right audio channel of an audio program, and the second speaker produces a left audio channel of an audio program

13. The seatback audio system of claim 1 comprising a soft-cell waveguide, the soft-cell waveguide having:

an innermost surface coupled to the first speaker;

an outermost surface spaced from the innermost surface by a distance greater than the one half of the first lateral dimension; and

a plurality of hollow tubes extending from the innermost surface to the outermost surface.

14. The seatback audio system of claim 13 where the plurality of hollow tubes includes at least ten tubes.

15. The seatback audio system of claim 13 where the plurality of hollow tubes includes at least twenty tubes.

16. The seatback audio system of claim 13 where the plurality of hollow tubes are honeycomb in shape.

17. The seatback audio system of claim 13 where the plurality of hollow tubes are round in shape.

18. The seatback audio system of claim 13 where the plurality of hollow tubes are cylindrical in shape.

19. The seatback audio system of claim 13 where the plurality of hollow tubes are rectangular in shape.

20. The seatback audio system of claim 13 where the soft-cell waveguide is formed from a flexible, resilient material.

21. The seatback audio system of claim 20 where the soft-cell waveguide is formed from open-cell foam.

22. The seatback audio system of claim 20 where the soft-cell waveguide is formed from closed-cell foam.

23. The seatback audio system of claim 13 where the surface of the seatback includes a recessed surface, the first speaker is coupled to the recessed surface.

24. The seatback audio system of claim 1 where the first speaker is coupled to a manual positioning system, and the manual positioning system is coupled to the surface of the seatback.

25. The seatback audio system of claim 24 where the manual positioning system includes a ball and a socket.

26. The seatback audio system of claim 25 where the first speaker is mounted to the ball, and socket is coupled to the surface of the seatback.

27. The seatback audio system of claim 25 where the first speaker is mounted to the socket, and ball is coupled to the surface of the seatback.

28. The seatback audio system of claim 1 where the first speaker is coupled to an automated positioning system, and automated positioning system is coupled to the surface of the seatback.

29. The seatback audio system of claim 1 where automated positioning system includes:

a housing;

a movable speaker mount;

a motor having a first gear coupled to the housing; and

a second gear coupled to the movable speaker mount;

where the first speaker is coupled to the movable speaker mount, and the first and second gears interact to move the movable speaker mount.

30. The seatback audio system of claim 1 where automated positioning system includes:

a housing;

a movable speaker mount;

a motor having a first gear coupled to the movable speaker mount; and

a second gear coupled to the housing;

where the first speaker is coupled to the movable speaker mount, and the first and second gears interact to move the movable speaker mount.

31. An seatback audio system for use with a headrest, comprising:

a body including a front surface and a side surface having a mounting port;

a speaker coupled to the front surface of the body;

a mounting post slidably coupled to the mounting port;

a gear strip rigidly coupled to the mounting post; and

a motor rigidly coupled to the body, the motor including a shaft having a gear coupled thereto;

where the gear interacts with the gear strip such that rotation of the shaft causes the body to slide along the mounting post.

32. An seatback audio system, comprising:

a headrest including a front surface and a mounting post having a first electrical connector;

a speaker coupled to the front surface of the headrest and electrically coupled to the first electrical connector; and

a backrest including a mounting port adapted to receive the mounting post, the mounting port having a second electrical connector;

where the first electrical connector and the second electrical connector are adapted to form an electrical connection when the mounting port receives the mounting post.

33. The seatback audio system of claim 32, where the headrest has front surface, further including a second speaker coupled to the front surface of the headrest and electrically coupled to the first connector, and a sound barrier coupled to the front surface of the headrest and positioned between the first speaker and the second speaker.

34. An seatback audio system for use with a seat, comprising:

a first speaker having a first lateral dimension configured to be coupled to a seatback;

a second speaker having a second lateral dimension configured to be coupled to

the seatback and separated from the first speaker; and

a sound barrier configured to be coupled to the seatback and configured to be positioned between the first speaker and the second speaker;

where the sound barrier has an outermost surface configured to be spaced apart from a surface of the seatback.

35. The seatback audio system of claim 34 where the first lateral dimension is equal to the second lateral dimension

36. The seatback audio system of claim 34 where the surface of the seatback includes a concave surface, and the first speaker, second speaker and the sound barrier are each coupled to the concave surface.

37. The seatback audio system of claim 34 where the surface of the seatback includes a first concave surface and a second concave surface, and the first speaker is coupled to the first concave surface and the second speaker is coupled to the second concave surface.

38. The seatback audio system of claim 34 where the first speaker and the second speaker are arranged as a dipole.

39. The seatback audio system of claim 34 where the seatback includes a headrest, and the surface is on the headrest.

40. The seatback audio system of claim 34 where the seatback is a backrest, and the surface is on the backrest.

41. The seatback audio system of claim 34 where the sound barrier is positioned to align with a spine of an occupant of the seat.

42. The seatback audio system of claim 34 where the first speaker produces a right audio channel of an audio program, and the second speaker produces a left audio channel of an audio program

43. The seatback audio system of claim 34 comprising a soft-cell waveguide, the soft-cell waveguide having:

an innermost surface coupled to the first speaker;

an outermost surface spaced from the innermost surface; and

a plurality of hollow tubes extending from the innermost surface to the outermost surface.

44. An seatback audio system, comprising:

a headrest including a surface and a mounting post having a first electrical connector;

a speaker coupled to the surface of the headrest and electrically coupled to the first electrical connector; and

a backrest including a mounting port adapted to receive the mounting post, the mounting port having a second electrical connector;

where the first electrical connector and the second electrical connector are adapted to form an electrical connection when the mounting port receives the mounting post, the electrical connection to provide electrical power to the seatback audio system.

45. The seatback audio system of claim 44, where the surface further includes a second speaker mounted in the surface and electrically coupled to the first connector, and a sound barrier coupled mounted in the surface and positioned between the first speaker and the second speaker.